ment of polio sequelae and the management of different complications in a rehabilitation unit.
Methods.– It's a prospective study over 3 years including 15 polio patients. The evaluation was based on neurological examination, joint and spinal assessment, an analog visual evaluation (VAE) of pain before and after therapy. A 2-month program of rehabilitation was initiated with prescription or adaptation of medical equipment.
Results.– Fifteen patients were collected with average age of 36 years (29–50 years). All patients had a crural monoplegia and moved with a specific equipment and Canadian cane. The complications observed were: a cuff syndrome (11 patients), back pain on scoliosis (9 patients), a hyperextension of the knee (5 patients). After rehabilitation, the improvement of VAS pain was 66%.
Discussion.– Specific complications of polio are mechanical and neurological, which add to the natural aging. These late effects justify a medical monitoring and adapted rehabilitation care.

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P059-e

Patient preference disability assessment for disabling knee osteoarthritis

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Keywords: Handicap; MACTAR; Knee osteoarthritis; ICF
Objective.– To assess patient priorities in disability and restriction in participation with disabling knee osteoarthritis (DKO) by the McMaster Toronto Arthritis Patient Preference Disability Questionnaire (MACTAR).
Methods.– One hundred and twenty-seven patients hospitalized in two tertiary care teaching hospitals were included and evaluated by the MACTAR, the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), Lequesne scale, the Fear-Avoidance Beliefs Questionnaire, a life satisfaction score, pain, global assessment of disease activity and functional impairment, and neuropathic pain. Correlations between MACTAR and other scales were analysed by Spearman coefficient.
Results.– On the MACTAR, 3 domains of the International Classification of Functioning, Disability and Health were cited as priorities: mobility (50.6% of patients), community, social and civic life (27.8%) and domestic life (16.2%). Thirty activities were ranked in importance. The MACTAR was correlated moderately with disability ($r = 0.5$) and fair with Lequesne, WOMAC, patient global assessment of his illness, pain and life satisfaction.
Discussion.– For assessing priorities in disability and restriction in participation among patients with DKO, the MACTAR has acceptable construct validity.

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P060-e

Evolution of neuromuscular abnormalities acquired in the intensive care unit

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Keywords: Neuromuscular abnormalities; Rehabilitation
Background.– The aim of this study was to evaluate the functional outcome of reeducated critical illness neuromuscular abnormalities (CINMA).
Methods.– This is a retrospective study of 5 years on patients referred for CINMA. The evaluation before and after rehabilitation was focused on the assessment of pain (visual analog scale), muscular strength (MS), joint mobility and functional assessment by functional independence measure (FIM).
Results.– We have collected 6 patients average age of 39 years (20–65). They had an average stay of 42 days in intensive care for multiorganic failure. The evaluation revealed a neuropathic pain intensity 60 mm on one patient, although improved with Pregabalin, an average MS of 2/5, osteomas in two patients and an average MIF 38/126. After an average growth of 29.6 months (4–84), there was a complete improvement of MS, joint mobility and functional score of 126/126 in 66.66%. For both patients with osteoma, the functional score was just 80/126.
Discussion.– The reeducation of CINMA should be started early to avoid orthopaedic, neurological sequelae and improve functional outcome and quality of life.

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P061-e

Heterotopic ossification after neuromuscular abnormalities acquired in the intensive care unit: About two cases

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Keywords: Paralysis; Neuromuscular abnormalities; Rehabilitation
Background.– Heterotopic ossifications (HO) rarely occur after of peripheral nerve lesions. We report the cases of two patients who presented HO following a neuromyopathy of intensive care.
Observations.– Case 1 was a 65-year-old man hospitalized in intensive care for cardiogenic shock. The diagnosis of osteoma of the hip was done at day 21 of hospitalization. The evolution after 2 years of rehabilitation was marked by improving range of motion and muscle strength by 80%. Functionally the patient was completely autonomous. Case 2 was a 53-year-old woman hospitalized for septic shock. Resuscitated for 40 days, she developed a tetraparesis (sensorimotor polyneuropathy) complicated by an immature osteoma in the right elbow and both hips. At 5 months of rehabilitation, the patient is much better on the articular and muscular level. In functional terms, the patient is partially autonomous.
Discussion.– The HO is underestimated in the medical intensive care. Preventing their installation and earlier diagnosis will establish an appropriate rehabilitation to reduce the risk of articular limitation and threatening the functional prognosis.

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P062-e

Neuromyopathy's resuscitation following a generalized tetanus: Case report

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Keywords: Neuromyopathy's resuscitation; Tetanus; Rehabilitation
Background.– The neuromyopathy's resuscitation is an acquired neuromuscular anomaly. Functional rehabilitation from the earliest days of hospitalization is essential to minimize functional deficits and reduce the risk of permanent disability.
Results.– A 53-years-old woman patient was sent to our physical rehabilitation department for reeducational care of a neuromyopathy's resuscitation following a generalized tetanus. On examination, walking using a walker, tetraparesis, flexum of the knees and elbows, bedsores at the heels and sacrum. The radiological assessment objectified osteomas in the two knees and elbows. The patient received physical therapy sessions. The evolution was marked by the improvement of the quality of work, loss of muscle weakness, decreasing knee flexum with persisting elbow flexum requiring surgical management.

Discussion.– Functional rehabilitation is an essential component in the management of neuromyopathy's resuscitation and must be initiated from the beginning of hospitalization in the ICU to prevent further complications.

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P063-e

An application of mechanostat theory to protect muscle-bone unit in spinal cord injury

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Keywords: Mechanostat theory; Bone-muscle unit; pQCT; SCI
Background.– Evidence shows that if muscle force is below a certain set point, i.e. if muscles are paralyzed, bone tissue is lost. The goal of this cross-sectional study was to investigate Frost's mechanostat theory in spinal cord injured subjects.
Methods.– The study included 31 complete paraplegics (AIS A, mean duration of paralysis: 5.6 ± 6 years) divided according to the neurological level of injury compared with 50 controls. All were examined with peripheral quantitative computed tomography (pQCT XCT-3000, Stratec Medizintechnik, Germany) in the tibia. Images were taken at 66% of the tibia's length (bone area/muscle area ratio).
Results.– In controls muscle area was highly correlated with bone area obtained from p QCT. In paraplegics statistically significant higher ratios bone area per unit of muscle area vs. controls were found ($P < 0.001$).
Discussion.– The relationship between bone and muscle was consistent in able-bodied and predictably altered in those with spinal cord injury, a clinical disease affecting bone and muscle. The result could be partial explained by the bone steady state while muscle was already in steady state and suggests that we can interfere to the bone area/muscle area ratio many years after paralysis to protect bone and muscle in SCI subjects.

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P064-e

Stance and gait changes after medial head of gastrocnemius (MHG) bisection in patients suffering from popliteal artery entrapment syndrome (PAES)

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Background.– This pilot study has been organized to research the effects of MHGM bisection on the gait cycle of patients suffering from PAES. This syndrome is a cause of intermittent claudication and may lead to degenerative stenosis of the artery and ischemia. Encountering that gastrocnemius is a muscle that plays several roles from the mid stance to the heel off faces of the gait cycle it is important to research whether this therapy creates an unstable and uncomfortable gait. No bibliography exists so far regarding this correlation.
Methods.– Patients complaining for intermittent vascular claudication will be investigated with: Magnetic resonance imaging of the popliteal fossa to ensure the entrapment of the artery and examine the size of the gastrocnemius; Digital angiography to confirm the entrapment; Kinetic gait analysis to estimate the ground forces throughout the gait cycle, the centre of gravity for the body and each lower extremity as well as the stabilometry to encounter any changes in the perception of balance. The imaging examinations will be performed before and 3 and 6 months after the surgery.

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P065-e

First results of kinematics analysis protocol on segmental shoulder motion with optoelectronic system for movement analysis in patients with rotator cuff syndrome

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Keywords: Kinematic analysis; Optoelectronic system; Movement analysis; Rotator cuff Syndrome; Segmentary shoulder's movements
Background.– In our kinematic analysis laboratory we have developed a protocol for angles measurement of the humerus and the scapula rotation during the segmentary shoulder's movements, with an optoelectronic system.
Methods.– This protocol has been validated on 30 healthy subjects and tested on 25 patients with rotator cuff syndrome documented by shoulder's clinical tests or echography. The aim of this work is to determine for which movement there are the most relevant restrictions on examined patients. For the movement analysis we have used an optoelectronic digital system (BTS SMART-DX) consists of two of infrared cameras directly connected to an integration box that contains appropriate software for data capture and motion analysis. The protocol used 8 markers positioned on anatomical points of subject's shoulder.
Results.– It has been possible to analyse the shoulder's movement limitations caused by rotator cuff syndrome. The most sensitive movements, compared to the normal class ones, are and humerus abduction (95.83° ± 20.04) and flexion (133.27° ± 12.56), extra-rotation (58.77° ± 19.33) and intra-rotation (69.47°° ± 17.98) while the less sensitive movements are scapula rotation during abduction and flexion (42.73° ± 1% and 48.63° ± 11%).
Discussion.– Next step is to use this protocol to follow how this angles change during the time in these patients after different medical or physical therapy.

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P066-e

Clinical value of musculoskeletal ultrasound in monitoring a novice treatment for acute plantar fasciitis: A note about capacitive resistive diathermy. Case report

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Keywords: Musculoskeletal ultrasound; Plantar fasciitis; Capacitive resistive diathermy; Monitoring treatment
Background.– Plantar fasciitis is the most common cause of heel pain afflicting nearly anyone stands for long time, the pain associated has a dramatic impact on physical mobility. Applying treatment with hope to speed up recovery after acute injury of plantar fascia is not yet justified by sufficient scientific data; the capacitive resistive diathermy (CRD) (Human Tecar®, Calco, Italy) has been suggested for early recovery of musculotendinous injuries while musculoskeletal ultrasound (MSUS) proved to be an excellent tool in diagnosing plantar fasciitis. Herein, we present a case of acute plantar fasciitis treated with 2 sessions of CRD, using MSUS for monitoring its efficacy.
Results.– A 52-years-old male with acute plantar fasciitis – diagnosed clinically and sonographically – was treated by CRD (Human Tecar®) followed by plantar